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SEQUENCE LISTING

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<120> SET1 Proteins and Uses Therefor

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<151> 2004-03-24

<160> 13

<170> PatentIn version 3.1

<210> 1

<211> 231

<212> PRT

<213> Staphylococcus aureus subsp. NCTC8325

<400> 1

Met Lys Leu Lys Thr Leu Ala Lys Ala Thr Leu Ala Leu Gly Leu Leu  
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Thr Thr Gly Val Ile Thr Ser Glu Gly Gln Ala Val Gln Ala Ala Glu  
20 25 30

Lys Gln Glu Arg Val Gln His Leu His Asp Ile Arg Asp Leu His Arg  
35 40 45

Tyr Tyr Ser Ser Glu Ser Phe Glu Tyr Ser Asn Val Ser Gly Lys Val  
50 55 60

Glu Asn Tyr Asn Gly Ser Asn Val Val Arg Phe Asn Pro Lys Asp Gln  
65 70 75 80

Asn His Gln Leu Phe Leu Leu Gly Lys Asp Lys Glu Gln Tyr Lys Glu  
85 90 95

## Untitled.ST25

Gly Leu Gln Gly Gln Asn Val Phe Val Val Gln Glu Leu Ile Asp Pro  
100 105 110

Asn Gly Arg Leu Ser Thr Val Gly Gly Val Thr Lys Lys Asn Asn Lys  
115 120 125

Thr Ser Glu Thr Asn Thr Pro Leu Phe Val Asn Lys Val Asn Gly Glu  
130 135 140

Asp Leu Asp Ala Ser Ile Asp Ser Phe Leu Ile Gln Lys Glu Glu Ile  
145 150 155 160

Ser Leu Lys Glu Leu Asp Phe Lys Ile Arg Gln Gln Leu Val Asn Asn  
165 170 175

Tyr Gly Leu Tyr Lys Gly Thr Ser Lys Tyr Gly Lys Ile Ile Ile Asn  
180 185 190

Leu Lys Asp Glu Asn Lys Val Glu Ile Asp Leu Gly Asp Lys Leu Gln  
195 200 205

Phe Glu Arg Met Gly Asp Val Leu Asn Ser Lys Asp Ile Arg Gly Ile  
210 215 220

Ser Val Thr Ile Asn Gln Ile  
225 230

<210> 2

<211> 231

<212> PRT

<213> *Staphylococcus aureus*

<400> 2

Met Lys Leu Lys Thr Leu Ala Lys Ala Thr Leu Ala Leu Gly Leu Leu  
1 5 10 15

Thr Thr Gly Val Ile Thr Ser Glu Gly Gln Ala Val Gln Ala Ala Glu  
20 25 30

Lys Gln Glu Arg Val Gln His Leu His Asp Ile Arg Asp Leu His Arg  
35 40 45

Tyr Tyr Ser Ser Glu Ser Phe Glu Tyr Ser Asn Val Ser Gly Lys Val  
50 55 60

Glu Asn Tyr Asn Gly Ser Asn Val Val Arg Phe Asn Pro Lys Asp Gln  
65 70 75 80

## Untitled.ST25

Asn His Gln Leu Phe Leu Leu Gly Lys Asp Lys Glu Gln Tyr Lys Glu  
 85 90 95

Gly Leu Gln Gly Gln Asn Val Phe Val Val Gln Glu Leu Ile Asp Pro  
 100 105 110

Asn Gly Arg Leu Ser Thr Val Gly Gly Val Thr Lys Lys Asn Asn Lys  
 115 120 125

Thr Ser Glu Thr Asn Thr Pro Leu Phe Val Asn Lys Val Asn Gly Glu  
 130 135 140

Asp Leu Asp Ala Ser Ile Asp Ser Phe Leu Ile Gln Lys Glu Glu Ile  
 145 150 155 160

Ser Leu Lys Glu Leu Asp Phe Lys Ile Arg Gln Gln Leu Val Asn Asn  
 165 170 175

Tyr Gly Leu Tyr Lys Gly Thr Ser Lys Tyr Gly Lys Ile Ile Ile Asn  
 180 185 190

Leu Lys Asp Glu Asn Lys Val Glu Ile Asp Leu Gly Asp Lys Leu Gln  
 195 200 205

Phe Glu Arg Met Gly Asp Val Leu Asn Ser Lys Asp Ile Arg Gly Ile  
 210 215 220

Ser Val Thr Ile Asn Gln Ile  
 225 230

<210> 3

<211> 231

<212> PRT

<213> *Staphylococcus aureus* subsp. *aureus* N315

<400> 3

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Thr Thr Gly Val Ile Thr Ser Glu Gly Gln Ala Val His Ala Lys Glu  
 20 25 30

Lys Gln Glu Arg Val Gln His Leu Tyr Asp Ile Lys Asp Leu Tyr Arg  
 35 40 45

Tyr Tyr Ser Ser Glu Ser Phe Glu Phe Ser Asn Ile Ser Gly Lys Val  
 50 55 60

## Untitled.ST25

Glu Asn Tyr Asn Gly Ser Asn Val Val Arg Phe Asn Gln Glu Lys Gln  
 65 70 75 80

Asn His Gln Leu Phe Leu Leu Gly Lys Asp Lys Asp Lys Tyr Lys Lys  
 85 90 95

Gly Leu Glu Gly Gln Asn Val Phe Val Val Lys Glu Leu Ile Asp Pro  
 100 105 110

Asn Gly Arg Leu Ser Thr Val Gly Gly Val Thr Lys Lys Asn Asn Lys  
 115 120 125

Ser Ser Glu Thr Asn Thr His Leu Phe Val Asn Lys Val Tyr Gly Gly  
 130 135 140

Asn Leu Asp Ala Ser Ile Asp Ser Phe Leu Ile Asn Lys Glu Glu Val  
 145 150 155 160

Ser Leu Lys Glu Leu Asp Phe Lys Ile Arg Lys Gln Leu Val Glu Lys  
 165 170 175

Tyr Gly Leu Tyr Lys Gly Thr Thr Lys Tyr Gly Lys Ile Thr Ile Asn  
 180 185 190

Leu Lys Asp Glu Lys Lys Glu Val Ile Asp Leu Gly Asp Lys Leu Gln  
 195 200 205

Phe Glu Arg Met Gly Asp Val Leu Asn Ser Lys Asp Ile Gln Asn Ile  
 210 215 220

Ala Val Thr Ile Asn Gln Ile  
 225 230

<210> 4

<211> 231

<212> PRT

<213> *Staphylococcus aureus* subsp. *aureus* Mu50

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 1 5 10 15

Thr Thr Gly Val Ile Thr Ser Glu Gly Gln Ala Val His Ala Lys Glu  
 20 25 30

Lys Gln Glu Arg Val Gln His Leu Tyr Asp Ile Lys Asp Leu Tyr Arg  
 35 40 45

## Untitled.ST25

Tyr Tyr Ser Ser Glu Ser Phe Glu Phe Ser Asn Ile Ser Gly Lys Val  
 50 55 60

Glu Asn Tyr Asn Gly Ser Asn Val Val Arg Phe Asn Gln Glu Lys Gln  
 65 70 75 80

Asn His Gln Leu Phe Leu Leu Gly Lys Asp Lys Asp Lys Tyr Lys Lys  
 85 90 95

Gly Leu Glu Gly Gln Asn Val Phe Val Val Lys Glu Leu Ile Asp Pro  
 100 105 110

Asn Gly Arg Leu Ser Thr Val Gly Gly Val Thr Lys Lys Asn Asn Lys  
 115 120 125

Ser Ser Glu Thr Asn Thr His Leu Phe Val Asn Lys Val Tyr Gly Gly  
 130 135 140

Asn Leu Asp Ala Ser Ile Asp Ser Phe Leu Ile Asn Lys Glu Glu Val  
 145 150 155 160

Ser Leu Lys Glu Leu Asp Phe Lys Ile Arg Lys Gln Leu Val Glu Lys  
 165 170 175

Tyr Gly Leu Tyr Lys Gly Thr Thr Lys Tyr Gly Lys Ile Thr Ile Asn  
 180 185 190

Leu Lys Asp Glu Lys Lys Glu Val Ile Asp Leu Gly Asp Lys Leu Gln  
 195 200 205

Phe Glu Arg Met Gly Asp Val Leu Asn Ser Lys Asp Ile Gln Asn Ile  
 210 215 220

Ala Val Thr Ile Asn Gln Ile  
 225 230

<210> 5

<211> 231

<212> PRT

<213> *Staphylococcus aureus* subsp. *aureus* Mw2

<400> 5

Met Lys Leu Lys Thr Leu Ala Lys Ala Thr Leu Ala Leu Gly Leu Leu  
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Thr Thr Gly Val Ile Thr Ser Glu Gly Gln Ala Val Gln Ala Lys Glu  
 20 25 30

## Untitled.ST25

Lys Gln Glu Arg Val Gln His Leu Tyr Asp Ile Lys Asp Leu His Arg  
 35 40 45

Tyr Tyr Ser Ser Glu Ser Phe Glu Phe Ser Asn Ile Ser Gly Lys Val  
 50 55 60

Glu Asn Tyr Asn Gly Ser Asn Val Val Arg Phe Asn Gln Glu Asn Gln  
 65 70 75 80

Asn His Gln Leu Phe Leu Ser Gly Lys Asp Lys Asp Lys Tyr Lys Glu  
 85 90 95

Gly Leu Glu Gly Gln Asn Val Phe Val Val Lys Glu Leu Ile Asp Pro  
 100 105 110

Asn Gly Arg Leu Ser Thr Val Gly Gly Val Thr Lys Lys Asn Asn Gln  
 115 120 125

Ser Ser Glu Thr Asn Thr Pro Leu Phe Ile Lys Lys Val Tyr Gly Gly  
 130 135 140

Asn Leu Asp Ala Ser Ile Glu Ser Phe Leu Ile Asn Lys Glu Glu Val  
 145 150 155 160

Ser Leu Lys Glu Leu Asp Phe Lys Ile Arg Gln His Leu Val Lys Asn  
 165 170 175

Tyr Gly Leu Tyr Lys Gly Thr Thr Lys Tyr Gly Lys Ile Thr Phe Asn  
 180 185 190

Leu Lys Asp Gly Glu Lys Gln Glu Ile Asp Leu Gly Asp Lys Leu Gln  
 195 200 205

Phe Glu His Met Gly Asp Val Leu Asn Ser Lys Asp Ile Gln Asn Ile  
 210 215 220

Ala Val Thr Ile Asn Gln Ile  
 225 230

<210> 6

<211> 201

<212> PRT

<213> S.aureus

<400> 6

Lys Glu Lys Gln Glu Arg Val Gln His Leu Tyr Asp Ile Lys Asp Leu  
 1 5 10 15

## Untitled.ST25

His Arg Tyr Tyr Ser Ser Glu Ser Phe Asp Phe Ser Asn Ile Ser Gly  
 20 25 30

Lys Val Glu Asn Tyr Asn Gly Ser Asn Val Val Arg Phe Asn Gln Asp  
 35 40 45

Gly Gln Asn His Gln Leu Phe Leu Leu Gly Glu Asp Lys Ala Lys Tyr  
 50 55 60

Lys Gln Gly Leu Glu Gly Gln Asn Val Phe Val Val Lys Glu Leu Ile  
 65 70 75 80

Asp Pro Asn Gly Arg Leu Ser Thr Val Gly Gly Val Thr Lys Lys Asn  
 85 90 95

Asn Gln Ser Ser Glu Thr Asn Thr Pro Leu Phe Val Lys Lys Val Tyr  
 100 105 110

Gly Gly Asn Leu Asp Ala Ser Ile Glu Ser Phe Ser Ile Asn Lys Glu  
 115 120 125

Glu Val Ser Leu Lys Glu Leu Asp Phe Lys Ile Arg Gln His Leu Val  
 130 135 140

Lys Asn Tyr Gly Leu Tyr Lys Gly Thr Thr Lys Tyr Gly Lys Ile Thr  
 145 150 155 160

Phe Asn Leu Lys Asp Gly Glu Lys Lys Glu Ile Asp Leu Gly Asp Lys  
 165 170 175

Leu Gln Phe Glu His Met Gly Asp Val Leu Asn Ser Lys Asp Ile Gln  
 180 185 190

Asn Ile Ala Val Thr Leu Lys Gln Ile  
 195 200

<210> 7

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<212> PRT

<213> S.aureus

<400> 7

Lys Glu Lys Gln Glu Arg Val Gln His Leu Tyr Asp Ile Lys Asp Leu  
 1 5 10 15

His Arg Tyr Tyr Ser Ser Glu Ser Phe Glu Phe Ser Asn Ile Ser Gly  
 20 25 30

## Untitled.ST25

Lys Val Glu Asn Tyr Asn Gly Ser Asn Val Val Arg Phe Asn Gln Glu  
 35 40 45

Lys Gln Asn His Gln Leu Phe Leu Leu Gly Glu Asp Lys Ala Lys Tyr  
 50 55 60

Lys Gln Gly Leu Gln Gly Gln Asp Val Phe Val Val Lys Glu Leu Ile  
 65 70 75 80

Asp Pro Asn Gly Arg Leu Ser Thr Val Gly Gly Val Thr Lys Lys Asn  
 85 90 95

Asn Gln Ser Ser Glu Thr Asn Ile His Leu Leu Val Asn Lys Leu Asp  
 100 105 110

Gly Gly Asn Leu Asp Ala Thr Asn Asp Ser Phe Leu Ile Asn Lys Glu  
 115 120 125

Glu Val Ser Leu Lys Glu Leu Asp Phe Lys Ile Arg Lys Gln Leu Val  
 130 135 140

Glu Lys Tyr Gly Leu Tyr Gln Gly Thr Ser Lys Tyr Gly Lys Ile Thr  
 145 150 155 160

Ile Ile Leu Asn Gly Gly Lys Lys Gln Glu Ile Asp Leu Gly Asp Lys  
 165 170 175

Leu Gln Phe Glu Arg Met Gly Asp Val Leu Asn Ser Lys Asp Ile Asn  
 180 185 190

Lys Ile Glu Val Thr Leu Lys Gln Ile  
 195 200

<210> 8

<211> 696

<212> DNA

<213> *Staphylococcus aureus* subsp. *aureus* NCTC6571

<400> 8  
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 attacatcag aaggtcaagc agttcaagcg gcagaaaaac aagagagagt acaacattta 120  
 catgatatta gagatttaca tcgatactac tcatcagaaa gtttcgaata tagtaatgtt 180  
 agtggtaagg ttgaaaacta caatggttct aacgttgtac gctttaaccc aaaagatcaa 240  
 aatcaccaat tattcttatt aggaaaagat aaagaacaat ataaagaagg tctacaaggc 300  
 caaaatgtct ttgttagtaca agaattaatt gatccaaacg gcagactatc tactgttggt 360

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ggtgtaacga agaaaaacaa caaaacttct gaaactaata cacctttatt tgttaataaa	420
gttaatggtg aagatttaga tgcataatt gactcatttt taatccaaaa agaagaaatc	480
tcattaaaag agcttgattt caaaatttaga caacaattag ttaataatta cggattatat	540
aaaggtacat ctaatacgg taaaatcatt atcaatttga aagacgaaaa taaagtagaa	600
attgatttag gtgataaatt acaattcgag cgcatggcg atgtgtgaa tagtaaagac	660
attagaggta tatacgac tattaaccaa atttaa	696

&lt;210&gt; 9

&lt;211&gt; 696

&lt;212&gt; DNA

<213> *Staphylococcus aureus* subsp. *aureus* N315

<400> 9	
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attacatcg aaggccaagc agtccacgca aaagaaaaagc aagagagagt acaacattt	120
tatgatatta aagacttata tcgatactac tcatcagaaa gtttgaatt cagtaatatt	180
agtggtaagg ttgaaaacta taacggttct aacgttgc acgttacca agaaaaacaa	240
aatcaccaat tattcttatt agaaaaagat aaagataaaat ataaaaaagg ctttgaaggc	300
cagaatgtct ttgtggtaaa agaattaatt gatccaaacg gtagactatc tactgttgg	360
ggtgtgacta agaaaaataa caaatcttct gaaactaata cacatttttgttaataaa	420
gtgtatggcg gaaatttaga tgcataatt gactcatttt taattaataa agaagaagtt	480
tcactgaaag aacttgattt caaaatttaga aagcaattag ttgaaaaata tggtttat	540
aaaggtacga ctaatacgg taagatcact atcaatttga aagacgagaa aaaggaagta	600
attgatttag gtgataaact gcaattcgag cgcatgggtg atgtgtgaa tagtaaggat	660
attcaaaaata tagcagtgac tattaatcaa atttaa	696

&lt;210&gt; 10

&lt;211&gt; 696

&lt;212&gt; DNA

<213> *Staphylococcus aureus* subsp. *aureus* Mu50

<400> 10	
atgaaattaa aaacgttagc taaagcaaca ttggcattag gcttattaac tactggtg	60
attacatcg aaggccaagc agtccacgca aaagaaaaagc aagagagagt acaacattt	120
tatgatatta aagacttata tcgatactac tcatcagaaa gtttgaatt cagtaatatt	180
agtggtaagg ttgaaaacta taacggttct aacgttgc acgttacca agaaaaacaa	240

## Untitled.ST25

aatcaccaat tattcttatt agaaaaagat aaagataaaat ataaaaaaagg ccttgaaggc	300
cagaatgtct ttgtggtaaa agaattaatt gatccaaacg gtagactatc tactgttggt	360
ggtgtgacta agaaaaataa caaatcttct gaaactaata cacatttatt tgtaataaaa	420
gtgtatggcg gaaattttaga tgcattcaatt gactcatttt taattaataa agaagaagtt	480
tcactgaaag aacttgattt caaaattttaga aagcaattttag ttgaaaaata tggtttat	540
aaaggtacga ctaaatacgg taagatcact atcaatttga aagacgagaa aaaggaagta	600
attgatttag gtgataaaact gcaatttcgag cgcatgggtg atgtgttgaa tagtaaggat	660
attcaaaata tagcagtgac tattaatcaa atttaa	696

&lt;210&gt; 11

&lt;211&gt; 696

&lt;212&gt; DNA

<213> *Staphylococcus aureus* subsp. *aureus* MW2

<400> 11	
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attacatcag aaggccaagc agtgcaagca aaagaaaaagc aagagagagt acaacatttta	120
tatgatatta aagacttaca tcgataactac tcattcagaaa gttttgaatt cagtaatatt	180
agtggtaagg ttgaaaattta taacggttct aacgttgatc gctttaacca agaaaatcaa	240
aatcaccaat tattcttattc agaaaaagat aaagataaaat ataaaagaagg ccttgaaggc	300
cagaatgtct ttgtggtaaa agaattaatt gatccaaacg gtagactatc tactgttggt	360
ggtgtaacga agaaaaataa ccaatcttct gaaactaata cacatttatt tataaaaaaa	420
gtgtatggcg gaaattttaga tgcattcaatt gaatcatttt taattaataa agaagaagtt	480
tcactgaaag aacttgattt caaaattttaga caacatttag ttaaaaattt tggtttat	540
aaaggtacga ctaaatacgg taagatcact ttcaatttga aagatggaga aaagcaagaa	600
attgatttag gtgataaaattt gcaatttcgag cacatggcg atgtgttgaa tagtaaggat	660
attcaaaata tagcagtgac tattaatcaa atttaa	696

&lt;210&gt; 12

&lt;211&gt; 606

&lt;212&gt; DNA

<213> *S.aureus*

<400> 12	
aaagaaaaac aggaacgtgt tcagcacctg tacgacatca aagacctgca ccgttactac	60
tcctccgaat cttcgaatt ctccaacatc tccggtaaaag ttgaaaaacta caacggttcc	120

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aacgttgttc	gtttcaacca	ggaaaaacag	aaccaccagc	tgttcctgct	gggtgaagac	180
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gacccgaacg	gtcgtctgtc	caccgttgggt	ggtgttacca	aaaaaaacaa	ccagtcctcc	300
gaaaccaaca	tccacctgct	ggtaacaaa	ctggacggtg	gtaacctgga	cgctaccaac	360
gactccttcc	tgatcaacaa	agaagaagtt	tccctgaaag	aactggactt	caaaatccgt	420
aaacagctgg	ttgaaaaata	cggctgtac	cagggtacct	ccaaatacgg	taaaatcacc	480
atcatcctga	acggtggtaa	aaaacaggaa	atcgacctgg	gtgacaaaact	gcagttcgaa	540
cgtatgggtg	acgttctgaa	ctccaaagac	atcaacaaa	tcgaagttac	cctgaaacag	600
atctaa						606

&lt;210&gt; 13

&lt;211&gt; 606

&lt;212&gt; DNA

&lt;213&gt; S.aureus

<400> 13	aaagaaaaac	aggaacgtgt	tcagcacctg	tacgacatca	aagacctgca	ccgttactac	60
tcctccgaat	ccttcgaatt	ctccaacatc	tccggtaaaag	ttgaaaacta	caacggttcc		120
aacgttgttc	gtttcaacca	ggaaaaacag	aaccaccagc	tgttcctgct	gggtgaagac		180
aaagctaaat	acaaacaggg	tctgcagggt	caggacgttt	tcgttgttaa	agaactgatc		240
gacccgaacg	gtcgtctgtc	caccgttgggt	ggtgttacca	aaaaaaacaa	ccagtcctcc		300
gaaaccaaca	tccacctgct	ggtaacaaa	ctggacggtg	gtaacctgga	cgctaccaac		360
gactccttcc	tgatcaacaa	agaagaagtt	tccctgaaag	aactggactt	caaaatccgt		420
aaacagctgg	ttgaaaaata	cggctgtac	cagggtacct	ccaaatacgg	taaaatcacc		480
atcatcctga	acggtggtaa	aaaacaggaa	atcgacctgg	gtgacaaaact	gcagttcgaa		540
cgtatgggtg	acgttctgaa	ctccaaagac	atcaacaaa	tcgaagttac	cctgaaacag		600
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